

Application Serial No: 10/730,184
In reply to Office Action of 11 May 2004

Attorney Docket No. 82995

AMENDMENTS TO THE CLAIMS

1. (Cancelled)

2. (Cancelled)

3. (Currently amended) ~~[[The]]~~ A weapon system in accordance with claim 2 further suitable for an underwater environment, said weapon system comprising:

a vehicle housing defined by a first portion and a second portion spaced apart from one another wherein said first and second portions are each configured to include a fixed wing and a plurality of movable control surfaces capable of maneuvering said weapon system;

a swivelable tow coupling mounted to said vehicle housing wherein the swiveling action of said tow coupling stabilizes the position of said weapon system;

a gun system sealed within a waterproof housing, said gun system including a gun with a muzzle of said gun protruding from said waterproof housing, said gun system rotatably mounted to and between said first portion and said second portion at an axis of rotation; and

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means for rotating said gun system to a position to fire
said gun at a target.

4. (Original) The weapon system in accordance with claim 3 further comprising means for searching for the target and controlling said gun system to fire at the target.

5. (Currently amended) The weapon system in accordance with claim [[2]] 3 further comprising means for propulsion.

6. (Original) The weapon system in accordance with claim 5 further comprising means for searching for the target and controlling said gun system to fire at the target.

7. (Cancelled)

8. (Currently amended) [[The]] A weapon system ~~in accordance with claim 7 further~~ suitable for an underwater environment,
said weapon system comprising:

a vehicle housing defined by first and second halves that
are spaced apart from one another, said first and
second halves balanced to each other as mirror images
of one another with respect to an imaginary plane that

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passes therebetween, wherein the balance of said first and second halves allows said vehicle housing to move through the water in a direction substantially aligned with the imaginary plane;

a swivellable tow couple mounted to said vehicle housing and centered on the imaginary plane wherein the swiveling action of said tow coupling stabilizes the position of said weapon system;

a gun system including a gun and ammunition sealed within a waterproof housing with a muzzle of said gun protruding from said waterproof housing, said gun system being rotatably mounted to and between said first and second halves of said vehicle housing at an axis of rotation, wherein said muzzle can discharge said ammunition therefrom into the water; and

means for rotating said gun system relative to said first and second halves of said vehicle housing to a position where said muzzle is positioned to fire said ammunition towards an underwater target.

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9. (Currently amended) The weapon system in accordance with claim 8 wherein each ~~[[said]]~~ exterior of said first and second halves of said vehicle housing is configured to include:

a V-shaped fixed wing having a substantially forward-facing surface and a substantially aft-facing surface; and

a plurality of movable control surfaces capable of maneuvering said weapon system.

10. (Currently amended) The weapon system in accordance with claim 9 wherein ~~said means for rotating~~ weapon system further includes:

~~sonar arrays~~ a sensing means coupled to each of said substantially forward-facing surfaces and said substantially aft-facing surfaces; and

a processing means ~~for processing outputs therefrom~~ coupled and responsive to said ~~sonar arrays~~ sensing means such that said weapon system searches for the underwater target and determines the position for said gun system to fire at the underwater target.

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11. (Currently amended) The weapon system in accordance with claim [[7]]8 further comprising means for propulsion coupled to each of said first and second halves.

12. (Currently amended) The weapon system in accordance with claim 11 wherein each [[said]] exterior of said first and second halves of said vehicle housing is configured to include:

a V-shaped fixed wing having a substantially forward-facing surface and a substantially aft-facing surface; and

a plurality of movable control surfaces capable of maneuvering said weapon system.

13. (Currently amended) The weapon system in accordance with claim 12 wherein said ~~means for rotating~~ said weapon system further includes:

~~sonar arrays~~ a sensing means coupled to each of said substantially forward-facing surfaces and said substantially aft-facing surfaces; and

a processing means ~~for processing outputs therefrom~~ coupled and responsive to said ~~sonar arrays~~ sensing means such that said weapon system searches for the underwater

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target and determines the position for said gun system
to fire at the underwater target.